

17343

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))			Docket No. Q106-US1	
In Re Application Of: Hisashi Tsukamoto et al.				
Serial No. 10/031,022	Filing Date January 14, 2002	Examiner N/A		Group Art Unit 1734
Title: <b>LITHIUM THIN FILM LAMINATION TECHNOLOGY ON ELECTRODE TO INCREASE BATTERY CAPACITY</b>				
Address to: Assistant Commissioner for Patents Washington, D.C. 20231				
37 CFR 1.97(b)				
1. <input checked="" type="checkbox"/> The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.				
37 CFR 1.97(c)				
2. <input type="checkbox"/> The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:				
<input type="checkbox"/> the statement specified in 37 CFR 1.97(e);				
OR				
<input type="checkbox"/> the fee set forth in 37 CFR 1.17(p).				

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**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
Q106-US1

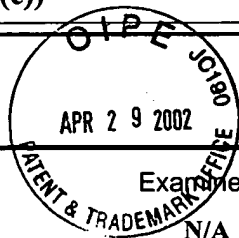
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Serial No.  
10/031,022

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Examiner  
N/A

Group Art Unit  
1734



**LITHIUM THIN FILM LAMINATION TECHNOLOGY ON ELECTRODE TO INCREASE BATTERY CAPACITY**

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

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- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 50-0921 as described below. A duplicate copy of this sheet is enclosed.
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Dated: 4-18-02

Mary Elizabeth Bush  
Reg. No. 38,402  
Quallion LLC Legal Department  
12744 San Fernando Road, Bldg. #4  
P.O. Box 923127  
Sylmar, CA 91381-3127

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PATENT  
Docket No.: Q106-US1

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :  
Hisashi Tsukamoto et al. :  
Application No.: 10/031,022 : Group Art Unit: 1734  
Filing Date: January 14, 2002 : Examiner: N/A  
Title: LITHIUM THIN FILM :  
LAMINATION TECHNOLOGY :  
ON ELECTRODE TO INCREASE :  
BATTERY CAPACITY :

Assistant Commissioner for Patents  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Attached is a completed Form PTO-1449 and copies of the references cited thereon.

Following are comments on any non-English-language references Pursuant to Rule 98:

JP 60-136560 to Sony Ebaredei KK describes a method for preventing reduction of capacity after several cycles in a lithium metal primary battery and improving battery impedance measured after a heat test of several days. Aluminum is deposited on the surface of a separator on the lithium metal electrode side of the separator (negative electrode side). Page 2, paragraph 1, discusses reasons for capacity dropping in a lithium metal battery. Paragraph 6 discusses improvement to impedance.

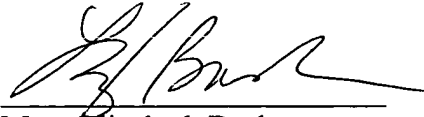
JP 06-026536 to Sony Corp. points out capacity loss at first charging state of a lithium-ion battery due to an irreversible capacity problem and proposes using a pre-doped negative electrode. However, they do not teach or disclose a method for lithium doping a negative electrode nor using lithium with a polymer film to pre-dope an electrode.

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JP 09-027345 to Ricoh Co. points out the importance of using a pre-doped negative electrode and mentions lithium deposition on a negative surface. They also mention the advantages and disadvantages of several processes, including laminating lithium onto metal foil, coating melted lithium or lithium powder or lithium metal alloy, depositing lithium or lithium metal alloy, and sputtering. They favor a vacuum deposition process. They do not, however, describe the method of the present invention.

Respectfully submitted:

Dated: 4-18-02

  
Mary Elizabeth Bush  
Reg. No. 38,402

Quallion LLC Legal Department  
P.O. Box 923127  
Sylmar, CA 91392-3127  
(818) 833-2003  
(818) 833-2065 (fax)

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Kn wn</b>	
				Application Number	10/031,022
				Filing Date	January 14, 2002
				First Named Inventor	Hisashi Tsukamoto et al.
				Art Unit	1734
				Examiner Name	N/A
				Attorney Docket Number	Q106-US1
Sheet	1	of	1		

*(use as many sheets as necessary)*

Sheet	1	of	1
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<b>Application Number</b>	10/031,022
<b>Filing Date</b>	January 14, 2002
<b>First Named Inventor</b>	Hisashi Tsukamoto et al.
<b>Art Unit</b>	1734
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<b>Attorney Docket Number</b>	Q106-US1

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Date	
Considered	

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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